

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. 97-250

WASTE DISCHARGE REQUIREMENTS  
CLOSURE OF  
YUBA-SUTTER DISPOSAL, INC.  
CLASS III LANDFILLS  
YUBA COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board), finds that:

1. Yuba-Sutter Disposal, Inc. (YSDI) (hereafter Discharger) owns and operates Yuba-Sutter Disposal, Inc. Landfill. YSDI is a subsidiary of Norcal Waste Systems, Inc. The facility was previously regulated by Waste Discharge Requirements (WDRs) Order No. 94-305 in conformance with Title 27, California Code of Regulations (27 CCR), Division 2, Subdivision 1 (hereafter Title 27). The discharger submitted a Report of Waste Discharge (RWD) on 5 May 1997 describing the closure of this facility and requesting approval of an engineered alternative to the prescriptive requirements of landfill cover. In addition to the landfill, YSDI operates a transfer station and a material recovery facility which are not covered by this permit.
2. The 160-acre facility is comprised of Assessor Parcels Nos. 18-120-021, 18-130-001, 18-120-015, and 18-130-016. The disposal site is on Highway 20, about two miles northeast of the intersection of Highways 20 and 70, within the northeast city limits of Marysville in Sections 4, 5, and 8, T15N, R4E, MDB&M, as shown in Attachment A. Attachments A through D are incorporated herein and made part of this Order.
3. The facility includes three existing landfills for waste disposal and equipment storage and support areas (see Attachment B). The landfills, into which municipal solid wastes and agricultural wastes were placed by area fill method, are described as follows:
  - a. **LF-1 (South Area)** - This landfill covers about 42 acres in the south and west central area of the facility. Wastes were placed in this unlined area from 1967 through 1984 after which it was closed in accordance with regulations that existed at the time. Most of this area has since been covered by building structures and paved parking, and is graded to drain toward an on-site storm water collection and removal system. There is no LCERS.
  - b. **LF-2 (Peach Orchard)** - This landfill covers about 25 acres in the central area of the facility. Wastes were accepted in this area from 1984 through 1988. A final cover system, consisting of a two feet of foundation soil, a one foot thick low-permeable

soil layer with permeability of  $1 \times 10^{-6}$  cm/sec or less, and a one foot thick vegetative layer was constructed in 1995. This unit has a clay liner. A small portion of the total area was constructed with a gravel blanket leachate collection and removal system that drains towards an interior sump.

- c. **LF-3 (North Area)** - This landfill covers about 38 acres in the north and east central area of the facility. This area accepted waste between 1988 and 1996. Phases I and II were constructed in 1989 and are lined with a single 60-mil HDPE geomembrane on a prepared subgrade. Phase III was constructed with a composite liner system consisting of a one foot thick low-permeability soil layer with  $1 \times 10^{-6}$  cm/sec permeability or less overlain by a 60 mil HDPE flexible membrane liner and LCRS, followed by a one foot operations layer. Phase IV was constructed with a composite liner system consisting of a two foot thick low-permeability soil layer with a permeability of  $1 \times 10^{-7}$  cm/sec or less overlain by a 60 mil HDPE flexible membrane liner and LCRS, followed by a one foot operations layer. Leachate is extracted via submersible pumps and transported by tanker truck to the City of Marysville Wastewater Treatment Plant for disposal.
4. Waste acceptance ceased in November 1996. Prior to closure, the average waste disposal rate at the facility was 500 tons/day. The site was permitted to receive a maximum of 160 tons/day of sewage sludge. Refuse was compacted in two-foot thick layers, and refuse slopes did not exceed 3:1 (horizontal:vertical). Waste was covered with at least six inches of cover.
5. Volatile Organic Compounds (VOCs) and elevated inorganic water quality parameters have been found in monitoring wells at the facility since monitoring began in 1987. The presence of VOCs which do not occur naturally in groundwater and the elevated inorganic water quality parameters indicate a release of waste to groundwater.
6. In response to the detection of concentrations of VOCs and elevated concentrations of general water quality parameters in four of the landfill facility's groundwater monitoring wells, the Discharger conducted evaluation monitoring. Later on 31 August 1993, the Discharger proposed a Corrective Action Plan consisting of a proposal to implement source control by closing LF-2 (Peach Orchard) with a soil cover consisting of a two foot foundation layer, a one foot barrier layer of  $1 \times 10^{-6}$  cm/sec compacted clay, and a one foot vegetative layer. The cover will provide a reduction in the percolation of precipitation and reduce the rate at which leachate is generated. Since LF-1 was closed prior to 1984, it did not receive a clay barrier layer. However, LF-1 is covered by asphalt, concrete, buildings, or aggregate and graded to drain runoff.

7. The Corrective Action Monitoring network consists of four monitoring wells immediately downgradient of LF-1 and LF-2. These WDRs include a new Monitoring and Reporting Program with provisions for a review of the groundwater monitoring network.
8. The Discharger has asserted that spatial variation in the groundwater exists underneath the landfill facility and implemented a detection monitoring system in which intrawell comparisons are used to determine if a release has occurred. Regional Board staff believes that the rationale for intrawell comparisons based on spatial variation needs to be reviewed to determine if it is the most appropriate method of determining if there has been a release.
9. An engineered alternative, as described in the 5 May 1997 RWD, consists of the following layers: an 18-inch foundation layer, consisting of a 6-inch sand gas collection layer, and 12 inches of soil; and a barrier layer composed of 40-mil geomembrane and geosynthetic (bentonite) clay layer on the top and a geomembrane overlain by a geocomposite drainage layer on side slopes for the closure of LF-3. The Board finds that this engineered alternative is acceptable.

#### WASTES AND THEIR CLASSIFICATION

10. The Discharger discharged wastes classified under Title 27 as 'non-hazardous solid waste' and 'inert waste'. These wastes included, but were not limited to, mixed municipal waste, construction/demolition wastes (including asbestos, if non-friable or less than 1 percent friable by volume), industrial wastes, agricultural wastes (including dewatered prune pulp), sewage sludge (in accordance with Title 27, Section 20220), tires, non-biohazardous hospital wastes and non-hazardous, non-designated soils.

#### DESCRIPTION OF SITE

11. Land within 1,000 feet of the site is primarily agricultural and residential. There is a separately owned and operated landfill adjacent to the south/southwest edge of the facility.
12. The site is underlain by the Victor Formation, about 500 feet of consolidated and unconsolidated sand, clay, silt and gravel. These sediments generally have moderate permeabilities with locally high permeabilities in the sandy and gravelly lenses.
13. The groundwater flows generally to the southwest beneath the site with groundwater elevations ranging between 50 to 63 feet above mean sea level.
14. The beneficial uses of groundwater are municipal, domestic, irrigation, stock watering, and process supply.

15. The site receives an average of 21 inches of precipitation per year (USGS datum, 1969). The mean evaporation for this facility is 55.63 inches per year (State of California, Department of Water Resources, recorded at the Marysville Station, 1949 - 1953).
16. The 100-year, 24-hour precipitation event for the site is 12.49 inches (State of California, Department of Water Resources, October 1976).
17. Surface drainage is to the southwest into the Yuba River, which is tributary to the Feather River, which is tributary to the Sacramento River, which flows into the Sacramento-San Joaquin Delta.
18. The beneficial uses of these surface waters are agriculture, industry, aesthetic enjoyment and preservation and enhancement of fish, wildlife and other aquatic resources.
19. Analysis by the Discharger estimated the maximum probable earthquake to be 5.7, which would produce a maximum average peak horizontal ground acceleration of 0.20 g.
20. Section 20240 of Title 27 requires five feet of separation between wastes and the highest groundwater level. Water is first encountered about three feet below the waste under LF-3. Therefore, on 3 April 1989, the Discharger requested approval of an engineered alternative. The engineered alternative, which allows a three-foot separation between wastes and groundwater consisting of a HDPE liner was approved by the Board in Order No. 89-097, adopted 26 May 1989.

#### CEQA AND OTHER CONSIDERATIONS

21. This action to revise WDRs for this facility is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.), in accordance with Title 14, CCR, Section 15301.
22. On 9 October 1991, the United States Environmental Protection Agency (USEPA) promulgated regulation (Title 40, Code of Federal Regulations, Parts 257 and 258, "federal municipal solid waste (MSW) regulations" or "Subtitle D") that apply, in California, to dischargers who own or operate Class II or Class III landfill units at which municipal solid waste (MSWLF) is discharged. The majority of the federal MSW regulations became effective on the "Federal Deadline", which is 9 October 1993.
23. This Order implements
  - a. the Water Quality Control Plan for the Sacramento River and San Joaquin River Basin Third Edition;

- b. the prescriptive standards and performance goals of California Code of Regulations, Title 27, Division 2, Subdivision 1 Solid Waste Requirements (Title 27) and subsequent revisions;
- c. the prescriptive standards and performance criteria of Part 258, Title 40 of the Code of Federal Regulations (Subtitle D of the Resource Conservation and Recovery Act); and
- d. State Water Resources Control Board Resolution No. 93-62, Policy for Regulations of Discharges of Municipal Solid Waste, adopted 17 June 1993.

### **PROCEDURAL REQUIREMENTS**

- 24. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.
- 25. The Board has notified the Discharger and interested agencies and persons of its intention to revise the waste discharge requirements for this facility.
- 26. In a public hearing, the Board heard and considered all comments pertaining to this facility and discharge.

IT IS HEREBY ORDERED that Order No. 94-305 is rescinded and it is further ordered that Yuba-Sutter Disposal, Inc. (YSDI) and its agents, assigns and successors, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

#### **A. DISCHARGE PROHIBITIONS**

- 1. The discharge of any waste at this site is prohibited.
- 2. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses or to groundwater is prohibited.
- 3. The discharge of waste to ponded water from any source is prohibited.

#### **B. DISCHARGE SPECIFICATIONS**

##### **General Specifications**

- 1. Wastes shall only be discharged into, and shall be confined to, the landfills specifically designed for their containment.

2. All wells within 500 feet of a waste management unit shall be sealed or abandoned to the satisfaction of the Yuba County Department of Environmental Health prior to the discharge of waste to the unit. A record of the sealing and/or abandonment of such wells shall be sent to the Board and to the State Department of Water Resources.
3. Leachate generation by a landfill unit LCRS shall not exceed 85 percent of the design capacity of the sump pump. If leachate generation exceeds this value or if the depth of fluid in an LCRS exceeds the minimum needed for safe pump operation, then the Discharger shall notify the Board in writing within seven days. Notification shall include a timetable for remedial or corrective action necessary to reduce leachate production.

#### **General WMU Construction**

4. A final construction report shall be submitted for acceptance by Board staff after completion of closure construction. The final closure construction report shall include, but not be limited to, as-built plans for the landfill, a CQA report with a written summary of the CQA program and all test results, analyses, and copies of the inspector's original field notes, and a certification as described in the Standard Provisions and Reporting Requirements.

#### **Protection From Storm Events**

5. Precipitation and drainage control systems shall be designed, constructed and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour precipitation conditions.
6. Landfills shall be designed, constructed and operated in compliance with precipitation and flood conditions contained in the Standard Provisions and Reporting Requirements referenced in Provision D.1., below.
7. Annually, prior to the anticipated rainy season, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the site and to prevent surface drainage from contacting or percolating through wastes.

#### **Landfill Closure Specifications**

8. Repair of existing closure construction must, at a minimum, comply with the existing approved construction plans.

9. Vegetation shall be planted and maintained over each closed landfill unit. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth not in excess of the vegetative layer thickness.
10. Closed landfill units shall be maintained to promote runoff and to prevent ponding.

#### C. RECEIVING WATER LIMITATIONS

##### Water Quality Protection Standards

The concentrations of Constituents of Concern in waters passing through the Points of Compliance shall not exceed the Concentration Limits established pursuant to Monitoring and Reporting Program No. 97-250, which is attached to and made part of this Order.

#### D. PROVISIONS

1. The Discharger shall in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order.
2. The Discharger shall comply with the Standard Provisions and Reporting Requirements, dated August 1997, which are hereby incorporated into this Order. The Standard Provisions and Reporting Requirements contain important provisions and requirements with which the Discharger must comply. A violation of any of the Standard Provisions and Reporting Requirements is a violation of these waste discharge requirements.
3. The Discharger shall comply with all applicable provisions of Title 27 CCR and 40 CFR Part 258 that are not specifically referred to in this Order.
4. The Discharger shall comply with Monitoring and Reporting Program No. 97-250, which is attached to and made part of this Order. This compliance includes, but is not limited to, maintenance of waste containment facilities and precipitation and drainage controls and monitoring groundwater, leachate from the landfill units, the vadose zone and surface waters, throughout the active life of the waste management units and the post-closure maintenance period. A violation of Monitoring and Reporting Program No. 97-250 is a violation of these waste discharge requirements.
5. The Discharger shall maintain legible records of the volume and type of each waste discharged at each landfill and the manner and location of the discharge. Such records shall be maintained at the facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of

the Board and of the State Water Resources Control Board at anytime during normal business hours.

6. The post-closure maintenance period shall continue until the Board determines that remaining wastes in the landfill will not threaten water quality.
7. The Discharger shall complete the task outlined in the WDRs and attached Monitoring and Reporting Program No. 97-250 in accordance with the following time schedule:

<u>Task</u>	<u>Compliance Date</u>
A. Groundwater Monitoring Network	
(1) Submit technical report on appropriateness and effectiveness of the existing groundwater monitoring network for detection and corrective action monitoring.	<b>1 March 1998</b>
B. Corrective Action	
(1) Submit technical report on the effectiveness of the Corrective Action Plan. The report must discuss future proposed corrective actions and provide a time schedule for implementation of the proposed corrective actions.	<b>1 March 1998</b>
C. Closure Construction	
(1) Submit as-built plans, construction quality assurance, and certification report.	<b>Within 2 months after completion of closure construction</b>
8. The Discharger shall provide proof to the Board <b>within sixty days after completing final closure</b> that the deed to the landfill facility property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that:	
a. the parcel has been used as a municipal solid waste landfill (MSWLF);	
b. land use options for the parcel are restricted in accordance with the post-closure land uses set forth in the post-closure plan and in WDRs for the landfill; and	




- c. in the event that the Discharger defaults on carrying out either the post-closure maintenance plan or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.
9. The Board will review this Order periodically and may revise requirements when necessary.

**E. REPORTING REQUIREMENTS**

1. The Discharger shall comply with the reporting requirements specified in this Order, in Monitoring and Reporting Program Order No. 97-250 and in the Standard Provisions and Reporting Requirements.
2. The Discharger shall submit a closure and post-closure maintenance plan (or submit suitable modifications to a pre-existing plan), that complies with 40 CFR 258.60 and with Title 27 and Title 14 of the CCR.
3. In the event of any change in ownership of this waste management facility, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Board.
4. The Discharger shall submit a status report regarding the financial assurances for corrective action and closure every five years after the date of adoption of these requirements that either validates the ongoing viability of the financial instrument or proposes and substantiates any needed changes.

I, GARY M. CARLTON, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 5 December 1997.

  
GARY M. CARLTON, Executive Officer

Attachments

RAE/CSL

Revised: 5 December 1997

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 97-250  
CLOSURE OF  
YUBA-SUTTER DISPOSAL, INC.  
CLASS III LANDFILLS  
YUBA COUNTY

The Discharger shall maintain water quality monitoring systems that are appropriate for detection monitoring and corrective action and that comply with the provisions of Title 27, California Code of Regulations (CCR), Division 2, Subdivision 1, Chapter 3, Subchapter 3.

Monitoring data indicate a release from LF-1 (South Area) and LF-2 (Peach Orchard). Specifically, vinyl chloride, acetone, carbon disulfide, cis-1,2-dichloroethene, benzene, chlorobenzene, xylenes, and 1,4-dichlorobenzene were detected downgradient of LF-1 and LF-2. Water quality data for general water quality parameters (Total Dissolved Solids (TDS), pH and Electrical Conductivity) and several of the metals (aluminum, antimony, arsenic, chromium, iron, manganese, vanadium and zinc) also have been detected. Closure and capping of LF-2 served as part of a corrective action under Article 1 of Title 27, Division 2, Subdivision 1, Chapter 3, Subchapter 3. LF-1 is mostly covered by building and paved surfaces.

Compliance with this Monitoring and Reporting Program, and with the companion Standard Provisions and Reporting Requirements, is ordered by Waste Discharge Requirements Order No. 97-250. Failure to comply with this Program, or with the Standard Provisions and Reporting Requirements, constitutes non-compliance with the WDRs and with the Water Code, which can result in the imposition of civil monetary liability.

**A. REPORTING**

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program and as required in the Standard Provisions and Reporting Requirements. Reports which do not comply with the required format will be **REJECTED** and the Discharger shall be deemed to be in non-compliance with the WDRs. In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof. A short discussion of the monitoring results, including notations of any water quality violations, shall precede the tabular summaries.

Field and laboratory tests shall be reported in the quarterly monitoring reports. Semi-annual monitoring reports shall be submitted to the Board by the **15th day of the month** following the calendar quarter in which the samples were taken. The results of any monitoring done more frequently than required at the locations specified herein shall be reported to the Board. An

annual report shall be submitted to the Board which contains tabular summaries of the monitoring data obtained during the previous twelve months. Data from monitoring parameters shall be graphed for the period of record so as to show historical trends at each well. The report shall include a discussion of the progress toward re-establishment of compliance with waste discharge requirements and water quality protection standard.

Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those which cannot be quantified and/or specifically identified. Metals shall be analyzed according to the methods listed in Attachment D.

## **B. REQUIRED MONITORING REPORTS**

### **1. Water Quality Protection Standard Report**

The Discharger submitted a water quality protection standard in the "*Article 5 Monitoring Program*" dated 1 July 1992 which was later revised in the "*Amendment to Report of Waste Discharge*" dated 31 August 1993. Any changes to this water quality protection standard shall be described in the annual monitoring report.

### **2. Detection Monitoring and Corrective Action Report**

The Discharger shall submit reports of the results of detection monitoring and corrective action in accordance with the schedules specified in this Monitoring and Reporting Program.

### **3. Annual Monitoring Summary Report**

The Discharger shall submit the Annual Monitoring Summary Report as specified in the Standard Provisions and Reporting Requirements. The progress of the corrective action program shall be analyzed and described in the Annual Monitoring Summary Report.

### **4. Constituents-of-Concern (COC) 5 Year Report**

In the absence of a *new* release being indicated, the Discharger shall monitor all Constituents of Concern for all Monitoring Points for each monitored medium for all COCs every fifth year, beginning with calendar year 1995 (the first Reporting Period ends 31 March 1996) with subsequent COC monitoring efforts being carried out every fifth year thereafter alternately in the Summer (Reporting period ends 30 September) and Winter (Reporting Period ends 31 March). The COC Report may be combined with a Detection Monitoring Report or an Annual Summary Report having a Reporting Period that ends at the same time.

## **5. Constituents-of-Concern (COC) Leachate Detection Report**

The Discharger shall report to the Board by no later than **31 January** of a given year the analytical results of the leachate sample taken the previous Fall, including an identification of all detected COCs in Attachment D that are not on the landfill's Constituent of Concern list. During any year in which a Spring leachate re-test is performed, the Discharger shall submit a report to the Board, by no later than **31 July** of that year, identifying all constituents which must be added to the landfill's COC list as a result of having been detected in both the (previous calendar year's) Fall sample and in the Spring re-test sample.

### **Standard Observations**

Each monitoring report shall include a summary and certification of completion of all Standard Observations for the waste management unit, for the perimeter of the landfill, and for the receiving waters. The standard observations shall be performed on a weekly basis and shall include those elements as defined in the Standard Provisions and Reporting Requirements.

## **C. MONITORING**

If the Discharger, through a detection monitoring program, or the Board finds that there is a measurably significant increase in indicator parameters or waste constituents over the water quality protection standards (established pursuant to Monitoring and Reporting Program No. 97-250) at or beyond the Points of Compliance, the Discharger shall notify the Board or acknowledge the Board's finding in writing within seven days, and shall immediately resample for the constituent(s) or parameter(s) at the point where the standard was exceeded. Within 90 days, the Discharger shall submit to the Board the results of the resampling and either:

- a. a report demonstrating that the water quality protection standard was not, in fact, exceeded; or
- b. an amended Report of Waste Discharge for the establishment of an evaluation monitoring program, per Section 20415 and 20425 of Title 27, which is designed to evaluate changes in water quality due to the release from the landfills.

If the Discharger, through an evaluation monitoring program, or the Board verifies that water quality protection standards have been exceeded at or beyond the Points of Compliance, the Discharger shall notify the Board or acknowledge the Board's finding in writing within seven days. Within 180 days, the Discharger shall submit to the Board an amended Report of Waste Discharge for the establishment of a corrective action program, per Section 20430 of Title 27,

which is designed to remediate releases from the landfill and to achieve compliance with the water quality protection standards.

#### **D. REQUIRED MONITORING PROGRAMS**

##### **1. Detection Monitoring and Corrective Action Program**

For each monitored medium, all Monitoring Points assigned to detection monitoring and/or corrective action monitoring shall be monitored for the Monitoring Parameters listed in this Program. The Discharger shall report, in writing, to the regional board on the effectiveness of the corrective action program. The Discharger shall submit these reports at least semi-annually.

For any given monitored medium, a sufficient number of samples shall be taken from all Monitoring Points to satisfy the data analysis requirements for a given Reporting Period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible.

Groundwater sampling shall also include an accurate determination of the groundwater surface elevation and field parameters (pH, temperature, electrical conductivity, turbidity) for that Monitoring Point. Groundwater elevations taken prior to purging the well and sampling for Monitoring Parameters shall be used to fulfill the groundwater gradient/direction analyses required. For each monitored groundwater body, the Discharger shall measure the water level in each well and determine groundwater gradient and direction at least semi-annually, including the times of expected highest and lowest elevations of the water level for the respective groundwater body. Groundwater elevations for all upgradient and downgradient wells for a given groundwater body shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater gradient and direction. This information shall be included in the quarterly monitoring reports.

Statistical or non-statistical analysis should be performed as soon as the monitoring data are available.

##### **3. Leachate Monitoring**

The landfill sumps shall be inspected weekly for leachate generation. Leachate monitoring shall be conducted as specified in Table I. The quantity of leachate pumped from each sump shall be measured continuously and reported as Leachate Flow Rate (in gallons/day).

**TABLE I - LEACHATE MONITORING PROGRAM**

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
<b>Field Parameters</b>		
Total Flow	gallons	Monthly
Flow Rate	gallons/day	Monthly
Specific Conductance	µmhos/cm	Monthly
pH	pH units	Monthly
<b>Monitoring Parameters</b>		
Total Dissolved Solids (TDS)	mg/L	Quarterly
Chlorides	mg/L	Quarterly
Sulfates	mg/L	Quarterly
Nitrate - Nitrogen	mg/L	Quarterly
<b>Constituents of Concern</b>		
Total Organic Carbon	mg/L	Annually
Carbonate	mg/L	Annually
Bicarbonate Alkalinity	mg/L	Annually
Volatile Organic Compounds (EPA Method 8260, see Attachment D)	µg/L	Annually
Semi-Volatile Organic Compounds (EPA Method 8270, see Attachment D)	µg/L	Annually
Organochlorine Pesticide, PCBs (EPA Method 8080)	µg/L	Annually
Chlorophenoxy Herbicides (EPA Method 8150)	µg/L	Annually
Inorganics (dissolved) (See Attachment D for Methods)	mg/L	Annually

#### **4. Groundwater Monitoring**

Field and laboratory tests shall be reported in the semi-annual monitoring reports. All monitoring parameters shall be graphed so as to show historical trends for the period of record at each well.

The groundwater surface elevation (in feet and hundredths, M.S.L.) in all wells shall be measured on a semi-annual basis and used to determine the velocity and direction of groundwater flow. This information shall be displayed on a water table contour map and/or groundwater flow net for the site and submitted with the quarterly monitoring reports.

The existing groundwater monitoring network consists of wells MW-1 through MW-10. Background water quality is measured at wells MW-5, 6, 7 and future wells to be installed along Highway 20. All downgradient wells are to be used for detection monitoring. Monitoring wells MW-1, 2, 3, and 10 are also used to measure the progress of corrective action.

WDRs Order No. 94-305 approved the use of intrawell comparisons for analysis at monitoring data. WDRs Order No. 97-250 requires the rationale for intrawell comparisons based on spatial variation be reassessed to determine if it is the most appropriate method of determining if there has been a release. WDRs Order No. 97-250 also requires the Discharger to assess the effectiveness of the existing groundwater monitoring network for detection and corrective action monitoring which may result in monitoring wells being added or removed from the network; however, the constituents and monitoring frequency given in Table II will remain the same after concentration limits have been established.

**TABLE II**  
**GROUNDWATER DETECTION MONITORING PROGRAM**  
**AND CORRECTIVE ACTION MONITORING PROGRAM**

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Field Parameters		
Temperature	°C	Semi-Annually
Groundwater Elevation	Ft. & hundredths, MSL	Semi-Annually
Specific Conductance*	µmhos/cm	Semi-Annually
pH*	pH units	Semi-Annually
Turbidity	Turbidity units	Semi-Annually
Monitoring Parameters		
Total Dissolved Solids (TDS)*	mg/L	Semi-Annually
Chlorides*	mg/L	Semi-Annually
Sulfates*	mg/L	Semi-Annually
Nitrate - Nitrogen*	mg/L	Semi-Annually
Volatile Organic Compounds*,** (EPA Method 8260, See Attachment C)	µg/L	Semi-Annually
Constituents of Concern		
Total Organic Carbon	mg/L	5 years
Carbonate	mg/L	5 years
Bicarbonate Alkalinity	mg/L	5 years
Volatile Organic Compounds (EPA Method 8260, See Attachment D)	µg/L	5 years
Semi-Volatile Organic Compounds (EPA Method 8270)	µg/L	5 years
Organochlorine Pesticide, PCBs (EPA Method 8080)	µg/L	5 years
Chlorophenoxy Herbicides (EPA Method 8150)	µg/L	5 years
Organophosphorus Compounds (EPA Method 8140)	µg/L	5 years
Inorganics (dissolved) (See Attachment D for Method)	mg/L	5 years

\* To be monitored quarterly for one year to determine a concentration limit.

\*\* To be monitored quarterly for wells in corrective action and every 5 years for wells in detection monitoring



## **5. Surface Water Monitoring**

Surface water drainage shall be evaluated upon the completion of the final cover. Surface water shall be sampled upstream of the landfill at background monitoring point SW-4, and downstream at monitoring points SW-1, SW-2, and SW-3 (see Attachment B). All monitoring points which are also monitoring stations for the storm water program monitoring shall be sampled on a semi-annual basis as part of the detection monitoring plan to monitor the potential for landfill impact to the Yuba River. Samples shall be collected from all stations and analyzed at the frequency and for the monitoring parameters specified in Table III.

Surface water monitoring reports may be submitted with the annual storm water monitoring report and also included in the annual monitoring report submitted pursuant to this monitoring and reporting program. The surface water monitoring report shall include evaluation of potential impacts of the facility on surface water quality and compliance with the Water Quality Protection Standard.

**TABLE III - SURFACE WATER MONITORING PROGRAM**

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
<b>Field Parameters</b>		
Temperature	°C	Semi-annual
Specific Conductance	µmhos/cm	Semi-annual
pH	pH units	Semi-annual
Turbidity	Turbidity units	Semi-annual
<b>Monitoring Parameters</b>		
Total Suspended Solids (TSS)*	mg/L	Semi-annual
Total Dissolved Solids (TDS)*	mg/L	Semi-annual
Chlorides*	mg/L	Semi-annual
Sulfates*	mg/L	Semi-annual
Nitrate - Nitrogen*	mg/L	Semi-annual
Total Organic Carbon*	mg/L	Semi-annual
<b>Constituents of Concern</b>		
Total Organic Carbon*	mg/L	5-years
Carbonate*	mg/L	5-years
Bicarbonate Alkalinity*	mg/L	5-years
Chemical Oxygen Demand*	mg/L	5-years
Dissolved Oxygen*	mg/L	5-years
Oil and Grease	mg/L	5-years
Inorganics* (total recoverable metals)	mg/L	5-years
(See Attachment D for Method)	mg/L	5-years
* To be monitored quarterly for one year to determine a concentration limit		

## 6. Unsaturated Zone Monitoring

Soil-pore liquid samples shall be analyzed at the frequency and for the monitoring parameters specified in Table IV.

Unsaturated Zone monitoring reports shall be submitted with the corresponding semi-annual groundwater monitoring and shall include evaluation of potential impacts of the facility on the unsaturated zone and compliance with the Water Quality Protection Standard.

**TABLE IV - UNSATURATED ZONE MONITORING PROGRAM**

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Field Parameters		
Specific Conductance	µmhos/cm	Quarterly
pH	pH units	Quarterly
Monitoring Parameters		
Total Dissolved Solids (TDS)*	mg/L	Quarterly
Chloride*	mg/L	Quarterly
Sulfate*	mg/L	Quarterly
Nitrate - Nitrogen*	mg/L	Quarterly
Constituents of Concern		
Total Organic Carbon*	mg/L	5 years
Carbonate*	mg/L	5 years
Bicarbonate Alkalinity*	mg/L	5 years
Volatile Organic Compounds (EPA Method 8260)	µg/L	5 years
Semi-Volatile Organic Compounds (EPA Method 8270)	µg/L	5 years
Organochlorine Pesticide, PCBs (EPA Method 8080)	µg/L	5 years
Chlorophenoxy Herbicides (EPA Method 8150)	µg/L	5 years
Organophosphorus Compounds (EPA Method 8140)	µg/L	5 years
Inorganics* (totals) (See Attachment D for Method)	mg/L	5 years
* To be monitored quarterly for one year in order to determine a concentration limit.		

#### **D. WATER QUALITY PROTECTION STANDARD**

The Water Quality Protection Standard (Standard) consists of the following elements:

- a. Constituents of Concern;
- b. Concentration Limits;
- c. Monitoring Points;
- d. Points of Compliance; and
- e. Compliance Period.

Each of these is described as follows:

##### **1. Constituents of Concern**

The 'COC list' (list of Constituents of Concern required under 27 CCR 20390) shall include all constituents listed in Tables I, II, III, and IV (above), the Waste Discharge Requirements No. 97-250, and all constituents listed in Attachment D. The Discharger shall monitor all COCs every five years, or more frequently as required under the corrective action monitoring program.

##### **2. Concentration Limits**

The Concentration Limit for any given Constituent of Concern or Monitoring Parameter in a given monitored medium (i.e., the uppermost aquifer) at a landfill shall be as follows, and shall be used as the basis of comparison with data from the Monitoring Points in that monitored medium:

- a. The background value established in the WDRs by the Board for that constituent and medium;
- b. The constituent's background value, established anew during each Reporting Period using only data from all samples collected during that Reporting Period from the Background Monitoring Points for that monitored medium. Either:
  - (1) The mean (or median, as appropriate) and standard deviation (or other measure of central tendency, as appropriate) of the constituent's background data; or
  - (2) The constituent's MDL, in cases where less than 10 percent of the background samples exceed the constituent's MDL; or

- c. A concentration limit greater than background, as approved by the Board for use during or after corrective action.

### **Groundwater**

Concentration limits for synthetic constituents in groundwater samples from unimpacted monitoring wells MW-4, MW-8, and MW-9 shall be set at the analytical detection limits. Concentration limits for metals and general water quality parameters must be calculated using the data from upgradient wells, including those to be installed as directed by the WDRs.

New concentration limit shall be calculated semi-annually and submitted in tabular form with each semi-annually report. The report should discuss the changes in concentration limits and if overall trends show concentration limits to be increasing, decreasing, or remaining the same.

### **Surface Water**

Insufficient data is currently available to calculate concentration limits from data collected at background monitoring point SW-4. The concentration limits shall be updated on a yearly basis to provide ongoing definition of background surface water quality.

Semi-annually, analytical data obtained from upgradient monitoring points SW-2 will be compared to the upper tolerance limits (and lower tolerance limits in the case of nitrate-nitrogen and pH) calculated for SW-4 to determine the effectiveness of the corrective action program.

## **3. Monitoring Points**

The monitoring points for detection monitoring shall be MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-10 and the surface water monitoring point for detection monitoring shall be SW-1, SW-2, SW-3, and SW-4. The groundwater monitoring points for corrective action shall be MW-1, MW-2, MW-3, and MW-10, and the surface water monitoring point for corrective action shall be SW-1 and SW-2 (shown in Attachment B).

## **4. Points of Compliance**

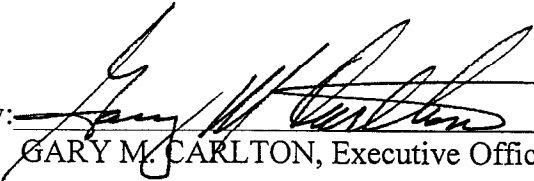
The points of compliance for groundwater are monitoring wells MW-1, MW-2, MW-3, MW-4, MW-8, MW-9, and MW-10. The point of compliance for surface water monitoring shall be SW-1, SW-2, and SW-3.

## 5. Compliance Period

The Compliance Period is the number of years equal to the active life of the landfill plus the closure period. Each time the Standard is exceeded (i.e., a release is discovered), the landfill begins a Compliance Period on the date the Board directs the Discharger to begin an Evaluation Monitoring Program. If the Discharger's Corrective Action Program (CAP) has not achieved compliance with the Standard by the scheduled end of the Compliance Period, the Compliance Period is automatically extended until the landfill has been in continuous compliance for at least three consecutive years.

The Discharger shall implement the above monitoring program on the effective date of this Order.

Ordered by:

  
GARY M. CARLTON, Executive Officer

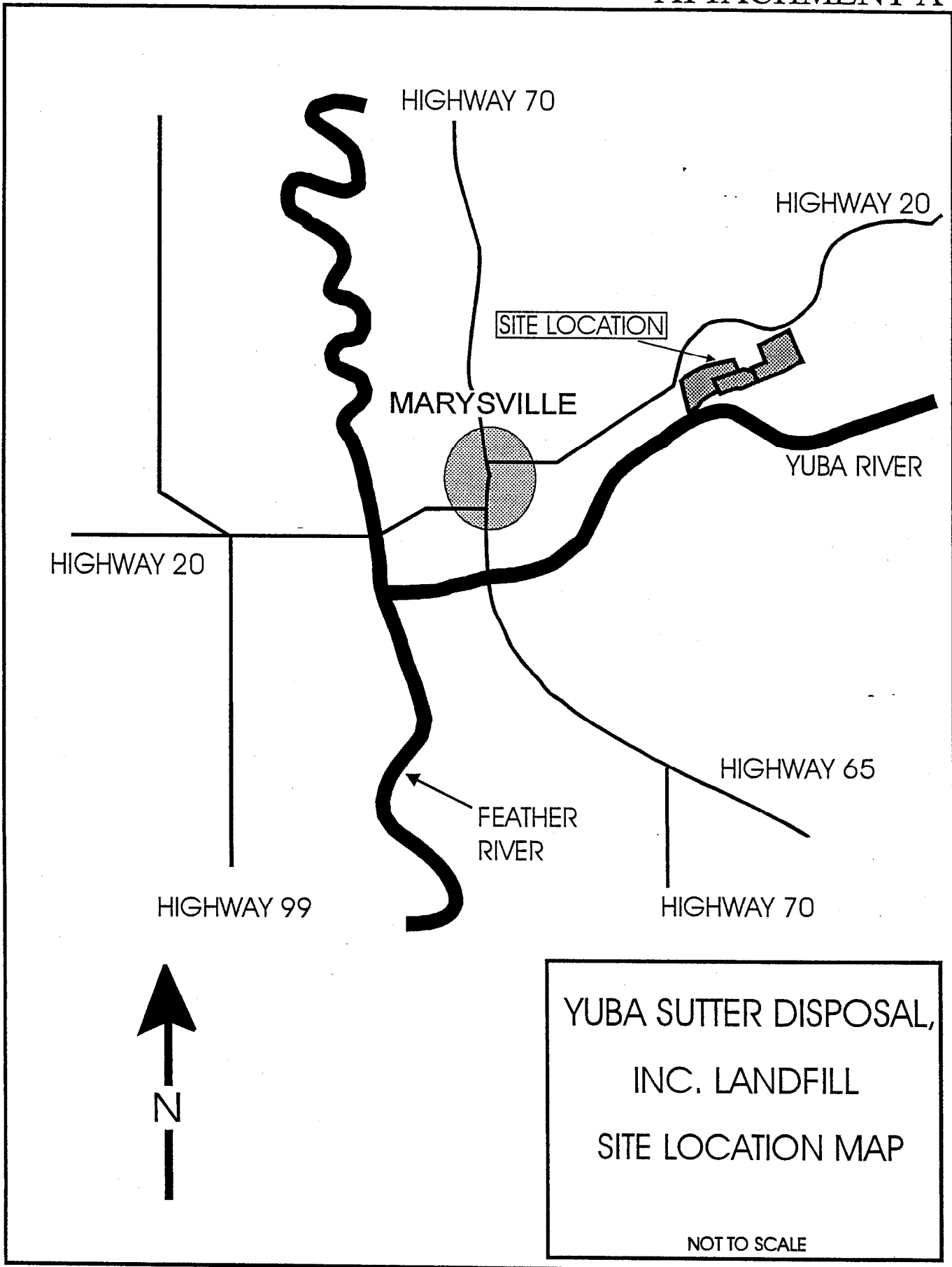
5 December 1997

(Date)

Attachments  
RAE/CSL

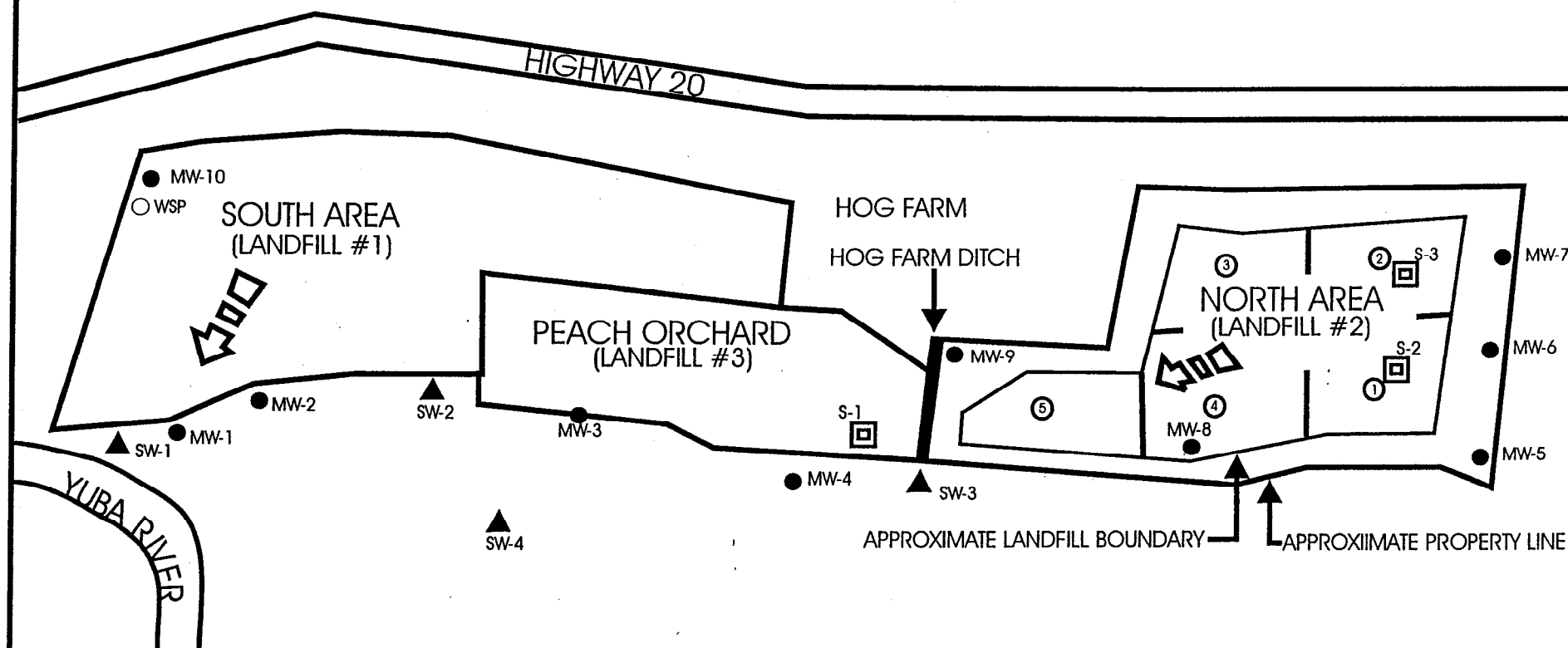
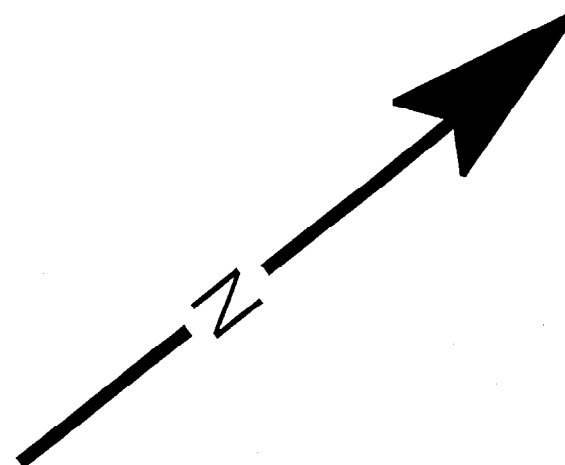
Revised: 5 December 1997

# ATTACHMENT A



YUBA-SUTTER  
DISPOSAL INC.  
YSDI

- MW-1 ● MONITOTING WELL  
SW-1 ▲ SURFACE WATER MONITORING WELL  
⇨ APPROXIMATE DIRECTION OF GROUNDWATER FLOW  
WSP ○ WATER SUPPLY WELL  
① MODULE #1  
— LANDFILL BOUNDARY  
— PROPERTY LINE  
□ LEACHATE COLLECTION SUMP  
NOT TO SCALE





### Attachment C

#### MONITORING PARAMETERS FOR DETECTION MONITORING

##### Surrogates for Metallic Constituents:

pH  
Total Dissolved Solids  
Specific Conductivity  
Chloride  
Sulfate  
Nitrate nitrogen

##### Constituents included in VOC<sub>water</sub> (by USEPA Method 8260):

Acetone  
Acrylonitrile  
Benzene  
Bromochloromethane  
Bromodichloromethane  
Bromoform (Tribromomethane)  
Carbon disulfide  
Carbon tetrachloride  
Chlorobenzene  
Chloroethane (Ethyl chloride)  
Chloroform (Trichloromethane)  
Dibromochloromethane (Chlorodibromomethane)  
1,2-Dibromo-3-chloropropane (DBCP)  
1,2-Dibromoethane (Ethylene dibromide; EDB)  
o-Dichlorobenzene (1,2-Dichlorobenzene)  
p-Dichlorobenzene (1,4-Dichlorobenzene)  
trans-1,4-Dichloro-2-butene  
1,1-Dichloroethane (Ethylidene chloride)  
1,2-Dichloroethane (Ethylene dichloride)  
1,1-Dichloroethylene (1,1-Dichloroethene; Vinylidene chloride)  
cis-1,2-Dichloroethylene (cis-1,2-Dichloroethene)  
trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)  
1,2-Dichloropropane (Propylene dichloride)  
cis-1,3-Dichloropropene  
trans-1,3-Dichloropropene  
Ethylbenzene

**Attachment C (continued)**

2-Hexanone (Methyl butyl ketone)  
Methyl bromide (Bromomethene)  
Methyl chloride (Chloromethane)  
Methylene bromide (Dibromomethane)  
Methylene chloride (Dichloromethane)  
Methyl ethyl ketone (MEK; 2-Butanone)  
Methyl iodide (Iodomethane)  
4-Methyl-2-pentanone (Methyl isobutylketone)  
Styrene  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane  
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene)  
Toluene  
1,1,1-Trichloroethane (Methylchloroform)  
1,1,2-Trichloroethane  
Trichloroethylene (Trichloroethene)  
Trichlorofluoromethane (CFC-11)  
1,2,3-Trichloropropane  
Vinyl acetate  
Vinyl chloride  
Xylenes

**Attachment D**

**CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS**

**Inorganics (by USEPA Method):**

Antimony	6010
Barium	6010
Beryllium	6010
Cadmium	6010
Chromium	6010
Cobalt	6010
Copper	6010
Silver	6010
Tin	6010
Vanadium	6010
Zinc	6010
Arsenic	7061
Lead	7421
Mercury	7470
Nickel	7520
Selenium	7741
Thallium	7841
Cyanide	9010
Sulfide	9030

**Volatile Organics (USEPA Method 8260):**

Acetone  
Acetonitrile (Methyl cyanide)  
Acrolein  
Acrylonitrile  
Allyl chloride (3-Chloropropene)  
Benzene  
Bis(2-ethylhexyl) phthalate  
Bromochloromethane (Chlorobromomethane)  
Bromodichloromethane (Dibromochloromethane)  
Bromoform (Tribromomethane)  
Carbon disulfide  
Carbon tetrachloride  
Chlorobenzene  
Chloroethane (Ethyl chloride)

Attachment D (continued)

Chloroform (Trichloromethane)  
Chloroprene  
Dibromochloromethane (Chlorodibromomethane)  
1,2-Dibromo-3-chloropropane (DBCP)  
1,2-Dibromoethane (Ethylene dibromide; EDB)  
o-Dichlorobenzene (1,2-Dichlorobenzene)  
m-Dichlorobenzene (1,3-Dichlorobenzene)  
p-Dichlorobenzene (1,4-Dichlorobenzene)  
trans-1,4-Dichloro-2-butene  
Dichlorodifluoromethane (CFC 12)  
1,1-Dichloroethane (Ethylidene chloride)  
1,2-Dichloroethane (Ethylene dichloride)  
1,1-Dichloroethylene (1,1-Dichloroethene; Vinylidene chloride)  
cis-1,2-Dichloroethylene (cis-1,2-Dichloroethene)  
trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)  
1,2-Dichloropropane (Propylene dichloride)  
1,3-Dichloropropane (Trimethylene dichloride)  
2,2-Dichloropropane (Isopropylidene chloride)  
1,1-Dichloropropene  
cis-1,3-Dichloropropene  
trans-1,3-Dichloropropene  
Ethylbenzene  
Hexachlorobutadiene  
2-Hexanone (Methyl butyl ketone)  
Isobutyl alcohol  
Isodrin  
Methacrylonitrile  
Methyl bromide (Bromomethane)  
Methyl chloride (Chloromethane)  
Methyl ethyl ketone (MEK; 2-Butanone)  
Methyl iodide (Iodomethane)  
Methyl methacrylate  
4-Methyl-2-pentanone (Methyl isobutyl ketone)  
Methylene bromide (Dibromomethane)  
Methylene chloride (Dichloromethane)  
Naphthalene  
Propionitrile (Ethyl cyanide)  
Styrene  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane

**Attachment D (continued)**

Tetrachloroethylene (Tetrachloroethene; Perchloroethylene; PCE)

Toluene

1,2,4-Trichlorobenzene

1,1,1-Trichloroethane, Methylchloroform

1,1,2-Trichloroethane

Trichloroethylene (Trichloroethene; TCE)

Trichlorofluoromethane (CFC-11)

1,2,3-Trichloropropane

Vinyl acetate

Vinyl chloride (Chloroethene)

Xylene (total)

**Attachment D (continued)**

**Semivolatile Organics (USEPA Method 8270 - base, neutral, & acid extractables):**

Acenaphthene  
Acenaphthylene  
Acetophenone  
2-Acetylaminofluorene (2-AAF)  
Aldrin  
4-Aminobiphenyl  
Anthracene  
Benzo[a]anthracene (Benzanthracene)  
Benzo[b]fluoranthene  
Benzo[k]fluoranthene  
Benzo[g,h,i]perylene  
Benzo[a]pyrene  
Benzyl alcohol  
alpha-BHC  
beta-BHC  
delta-BHC  
gamma-BHC (Lindane)  
Bis(2-chloroethoxy)methane  
Bis(2-chloroethyl) ether (Dichloroethyl ether)  
Bis(2-chloro-1-methylethyl) ether (Bis(2-chloroisopropyl) ether; DCIP)  
4-Bromophenyl phenyl ether  
Butyl benzyl phthalate (Benzyl butyl phthalate)  
Chlordane  
p-Chloroaniline  
Chlorobenzilate  
p-Chloro-m-cresol (4-Chloro-3-methylphenol)  
2-Chloronaphthalene  
2-Chlorophenol  
4-Chlorophenyl phenyl ether  
Chrysene  
o-Cresol (2-methylphenol)  
m-Cresol (3-methylphenol)  
p-Cresol (4-methylphenol)  
4,4'-DDD  
4,4'-DDE  
4,4'-DDT  
Diallate  
Dibenz[a,h]anthracene  
Dibenzofuran

Attachment D (continued)

Di-n-butyl phthalate  
o-Dichlorobenzene (1,2-Dichlorobenzene)  
m-Dichlorobenzene (1,3-Dichlorobenzene)  
p-Dichlorobenzene (1,4-Dichlorobenzene)  
3,3'-Dichlorobenzidine  
2,4-Dichlorophenol  
2,6-Dichlorophenol  
Dieldrin  
Diethyl phthalate  
p-(Dimethylamino)azobenzene  
7,12-Dimethylbenz[a]anthracene  
3,3'-Dimethylbenzidine  
2,4-Dimethylphenol (m-Xylenol)  
Dimethyl phthalate  
m-Dinitrobenzene  
4,6-Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)  
2,4-Dinitrophenol  
2,4-Dinitrotoluene  
2,6-Dinitrotoluene  
Di-n-octyl phthalate  
Diphenylamine  
Endosulfan I  
Endosulfan II  
Endosulfan sulfate  
Endrin  
Endrin aldehyde  
Ethyl methacrylate  
Ethyl methanesulfonate  
Famphur  
Fluoranthene  
Fluorene  
Heptachlor  
Heptachlor epoxide  
Hexachlorobenzene  
Hexachlorobutadiene  
Hexachlorocyclopentadiene  
Hexachloroethane  
Hexachloropropene  
Indeno(1,2,3-c,d)pyrene  
Isophorone

Attachment D (continued)

Isosafrole  
Kepone  
Methapyrilene  
Methoxychlor  
3-Methylcholanthrene  
Methyl methanesulfonate  
2-Methylnaphthalene  
Naphthalene  
1,4-Naphthoquinone  
1-Naphthylamine  
2-Naphthylamine  
o-Nitroaniline (2-Nitroaniline)  
m-Nitroaniline (3-Nitroaniline)  
p-Nitroaniline (4-Nitroaniline)  
Nitrobenzene  
o-Nitrophenol (2-Nitrophenol)  
p-Nitrophenol (4-Nitrophenol)  
N-Nitrosodi-n-butylamine (Di-n-butylnitrosamine)  
N-Nitrosodiethylamine (Diethylnitrosamine)  
N-Nitrosodimethylamine (Dimethylnitrosamine)  
N-Nitrosodiphenylamine (Diphenylnitrosamine)  
N-Nitrosodipropylamine (N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine)  
N-Nitrosomethylethylamine (Methylethylnitrosamine)  
N-Nitrosopiperidine  
N-Nitrosopyrrolidine  
5-Nitro-o-toluidine  
Pentachlorobenzene  
Pentachloronitrobenzene (PCNB)  
Pentachlorophenol  
Phenacetin  
Phenanthrene  
Phenol  
p-Phenylenediamine  
Polychlorinated biphenyls (PCBs; Aroclors)  
Pronamide  
Pyrene  
Safrole  
1,2,4,5-Tetrachlorobenzene  
2,3,4,6-Tetrachlorophenol  
o-Toluidine



**Attachment D (continued)**

Toxaphene  
1,2,4-Trichlorobenzene  
2,4,5-Trichlorophenol  
2,4,6-Trichlorophenol  
0,0,0-Triethyl phosphorothioate  
sym-Trinitrobenzene

**Organophosphorus Compounds (USEPA Method 8141):**  
0,0-Diethyl 0-2-pyrazinyl phosphorothioate (Thionazin)  
Dimethoate  
Disulfoton  
Methyl parathion (Parathion methyl)  
Parathion  
Phorate

**Chlorinated Herbicides (USEPA Method 8150):**  
2,4-D (2,4-Dichlorophenoxyacetic acid)  
Dinoseb (DNBP; 2-sec-Butyl-4,6-dinitrophenol)  
Silvex (2,4,5-Trichlorophenoxypropionic acid; 2,4,5-TP)  
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)

## INFORMATION SHEET

CLOSURE OF  
YUBA-SUTTER DISPOSAL, INC.  
YSDI SANITARY LANDFILL  
CLASS III LANDFILL  
YUBA COUNTY

Yuba Sutter Disposal Inc. operated a 160-acre Class III landfill facility, between 1967 and 1997, on Highway 20 within the northeast city limits of Marysville. The facility which consists of two lined (LF-2 and LF-3) and one unlined (LF-1) landfill units, accepted wastes from Marysville, Yuba City, Wheatland, Olivehurst, and unincorporated areas of Yuba and Sutter counties. The facility ceased accepting waste in November 1996. The facility is adjacent to another landfill owned and operated by other parties. These WDRs provide the requirements for closure and postclosure activities.

These WDRs are being updated in response to a Report of Waste Discharge requesting approval of an engineered alternative cap. The engineered alternative cap is for LF-3 and consists of substitution of a geosynthetic clay liner for the prescriptive clay barrier layer. Also, the foundation layer has been reduced in thickness from 24 inches, as required under Title 27, to 18 inches. These revised WDRs approve this engineered alternative. Closure activities are scheduled to be complete by December 1997.

Water is first encountered about 10 feet below the waste under LF-1 and LF-2 and about three feet below the waste under LF-3. However, a composite liner under LF-3 provides an engineered alternative to the required five-foot minimum separation between wastes and water, which was approved by the Board in WDRs Order No. 89-091. The beneficial uses of ground water are domestic, municipal, irrigation, stock watering, and process supply.

Surface drainage is generally to the southeast into the Yuba River. The beneficial uses of surface waters are agriculture, industry, aesthetic enjoyment, and preservation and enhancement of fish, wildlife and other aquatic resources.

The groundwater monitoring network consists of ten wells. The 1987 detection of volatile organic compounds in groundwater indicated a release of wastes to groundwater. The Discharger closed LF-2 in 1995 as a corrective action to the release to groundwater. This corrective action was approved in 1993.

The WDRs provide closure requirements and request that Discharger assess the effectiveness of past corrective actions and, if necessary, propose new corrective actions to remediate the release of wastes to groundwater. The WDRs also require the Discharger upgrade the existing groundwater monitoring network to ensure that the detection and corrective action monitoring programs comply with Title 27. The Discharger will reassess the appropriateness of intrawell comparison based on spatial variation to determine if it is the most appropriate method for determining if there has been a release.

RAE/CSL: 5 December 1997